Developing Bots

An introduction

Agenda

- Who are we
- What is a bot
- When to write a bot, and alternatives
- Pywikibot
 - Python
 - PAWS & Pywikibot introduction
- Considerations when writing a bot

Who are we

- What is your name?
- Are you an editor?
- Do you know how to program? Python?
- Do you run/develop any tools?
- What do you want to learn about?

Useful resource!

https://en.wikipedia.org/wiki/Help:Creating_a_bot

Robots (bots) are **automatic processes** that interact with Wikimedia projects as if they were human editors.

Bots can **automate tasks** and perform them **much faster** than humans.

For example, if you have a simple task that you need to perform **lots of times**.

Like adding a template to all pages in a category with 1000 pages.

Creating bots requires at least some prior programming experience.

- Using a command line
- Programming language
- SSH & Linux

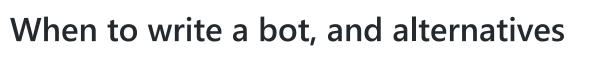
All of this can be learnt with time and effort 6

Disclaimer:

Maybe you don't really need to write a bot.

It is often simpler to request a bot job from an existing bot.

If you have only **periodic** requests or are **uncomfortable with programming**, request a bot job from an **existing** bot.



Useful bots:

https://meta.wikimedia.org/wiki/Small_wiki_toolkits/Starter_kit/Bots_and_Tools#Bots

There also are a number of tools available to **anyone**.

For example, AutoWikiBrowser (AWB).

https://en.wikipedia.org/wiki/Wikipedia:AutoWikiBrowser

Other editing tools:

https://en.wikipedia.org/wiki/Wikipedia:Tools/Editing_tools

There are a number of standard bot frameworks available.

The most popular and common is:

Pywikibot

Also known as PWB

https://www.mediawiki.org/wiki/Manual:Pywikibot

Written in Python

https://python.org

```
print("Hello, I'm Python!")
#> Hello, I'm Python!
```

```
1 / 2

#> 0.5

2 ** 3

#> 8

17 / 3

#> 5.66666666666667

17 // 3 # floor division

#> 5
```

```
fruits = ['Banana', 'Apple', 'Lime']
loud_fruits = [fruit.upper() for fruit in fruits]
print(loud_fruits)
#> ['BANANA', 'APPLE', 'LIME']
```

```
numbers = [2, 4, 6, 8]
product = 1
for number in numbers:
    product = product * number

print('The product is:', product)
#> The product is: 384
```

Python

Great resource and cheatsheet



https://learnxinyminutes.com/docs/python/

Community and support:

- #pywikibot IRC channel (freenode)
- pywikibot@lists.wikimedia.org
 - https://lists.wikimedia.org/mailman/listinfo/pywikibot

https://www.mediawiki.org/wiki/Manual:Pywikibot/Communication

Installing Pywikibot

https://www.mediawiki.org/wiki/Manual:Pywikibot/Installation

Easiest way to get running with Pywikibot:

PAWS

- https://wikitech.wikimedia.org/wiki/PAWS
- https://www.mediawiki.org/wiki/Manual:Pywikibot/PAWS

Running the available scripts from the command line:

- https://www.mediawiki.org/wiki/Manual:Pywikibot/Scripts
- https://phabricator.wikimedia.org/diffusion/PWBC/

Developing bots with Python. Reference:

- https://doc.wikimedia.org/pywikibot/
- https://phabricator.wikimedia.org/diffusion/PWBC/

Running a bot on Toolforge:

https://wikitech.wikimedia.org/wiki/Help:Toolforge/Pywikibot

when writing a bot

Will it be manually assisted or fully automated?

Alone, or with the help of **other programmers**?

Will the bot's requests, edits, or other actions be logged?

If so, on local media, or on wiki pages?

How will it be written and run?

On a web browser, or standalone?

Which programming language or framework will it use?

If the bot is a standalone program, will it run on your **local computer**, or on a **remote server**?

If the bot runs on a remote server,
will other editors be able to **operate** the bot,
start it, or stop it?

FIN

Questions? Comments?